IN THE CLAIMS

1. (canceled)

2. (currently amended) A dry reagent lateral flow strip assay device for detecting two or more analytes in a test sample comprising:

a) a sample application zone; and

b) two or more test zones;

wherein the sample application zone and the two or more test zones are in fluid communication with one another through a transport matrix; and wherein the transport matrix further comprises a lateral path along which the sample travels ~~laterally~~in a lateral direction, and a transverse path along which the sample travels ~~transversely~~ in a direction transverse to said lateral path, said lateral path being in a two-dimensional plane and said transverse path being in a third dimensional plane so as to direct said test sample to said two or more test zones.

3. (previously presented) The assay device of claim 2 for performing general chemistry assays, wherein the two or more test zones are general chemistry reagent zones comprising at least one enzyme.

4. (previously presented) The assay device of claim 2, wherein the two or more analytes are general chemistry analytes selected from the group consisting of: creatine, creatinine, glucose, cholesterol, high density lipoprotein (HDL) cholesterol, N-telopeptide, low density lipoprotein (LDL) cholesterol, triglycerides and blood urea nitrogen (BUN).

5. (currently amended) The assay device of claim 2, wherein one of the at least two or more test zones is a ~~the~~ general chemistry reagent zone, said general chemistry reagent zone ~~further comprising es~~ an indicator.

6. (previously presented) The assay device of claim 2 for performing a binding assay, wherein the two or more

test zones are binding member zones comprising at least one binding member.

7. (previously presented) The assay device of claim 6, wherein the binding member is an antibody.

8. (previously presented) The assay device of claim 2, wherein the two or more analytes are selected from the group consisting of: antigens, antibodies, macromolecules, vitamins, lectins, carbohydrates, proteins, peptides, amino acids, hormones, steroids, therapeutic drugs, drugs of abuse, bacterium and viruses.

9. (previously presented) The assay device of claim 2, wherein the two or more analytes are haptens that form binding pairs with antibodies.

10. (previously presented) The assay device of claim 7, wherein the antibody is immobilized in the binding member zone.

11. (previously presented) The assay device of claim 10, wherein the antibody is diffusively immobilized in the binding member zone.

12. (previously presented) The assay device of claim 10, wherein the antibody is non-diffusively immobilized in the binding member zone.

13. (previously presented) The assay device of claim 2, wherein the sample application zone further comprises a sample pad in fluid communication with the transport matrix.

14. (previously presented) The assay device of claim 13, further comprising a sample treatment pad in fluid communication with the transport matrix.

15. (previously presented) The assay device of claim 14, wherein the sample treatment pad comprises a quarternary ammonium derived membrane for trapping ascorbate and other anionic interferents.

16. (previously presented) The assay device of claim 13, further comprising a sample filter pad in fluid communication with the transport matrix for removing undesired contaminants from the sample.

17. (previously presented) The assay device of claim 13, wherein the sample pad removes large particulate debris from the sample.

18. (previously presented) The assay device of claim 13, wherein the sample pad adjusts the pH and ionic composition of the sample.

19. (previously presented) The assay device of claim 2, wherein the transport matrix is a porous material along which the sample travels laterally.

20. (previously presented) The assay device of claim 2, further comprising a metering layer between the transport matrix and the two or more test zones through which the sample spreads uniformly across the transport matrix.

21. (previously presented) The assay device of claim 3, wherein the enzyme produces a reaction product when at least one of the analytes is present in the sample.

22. (previously presented) The assay device of claim 6, wherein at least one of the binding members forms a complex with at least one analyte.

23. (previously presented) The assay device of claim 5, wherein the indicator forms a detectable signal when at least one of the analytes is present in the sample.

24. (previously presented) The assay device of claim 6, wherein at least one of the binding member zones further comprises an indicator that forms a detectable signal when at least one of the analytes is present in the sample.

25. (previously presented) The assay device of claim 2, further comprising a detection zone corresponding to each test zone.

26. (withdrawn) A dry reagent lateral flow strip assay device for detecting two or more analytes in a test sample comprising:

a) a sample application zone;

b) a general chemistry reagent zone comprising at least one enzyme; and

c) a binding member zone comprising at least one binding member; wherein the same application zone, the general chemistry reagent zone and the binding member zone are in fluid communication with one another through a transport matrix.

27. (withdrawn) A diagnostic device for performing a dry reagent lateral flow assay on a strip comprising:

a) a housing;

b) a cover for the housing having an interior surface and an exterior surface, wherein a sample receptor extends therethrough;

c) a sample pad;

d) at least one dry reagent lateral flow strip assay device according to claim 2 in fluid communication with the sample pad; and

e) a reflectometer enclosed in the housing adapted to transmit results from the assay.

28. (withdrawn) The device of claim 27, wherein the sample receiving device further comprises a sample filter pad.

29. (withdrawn) The device of claim 27, wherein the sample receiving device removes undesired contaminants from the sample.

30. (withdrawn) The device of claim 27, wherein the assay strip further comprises at least one sample fitter pad.

31. (withdrawn) The device of claim 27, wherein the reflectometer further comprises a printed writing assembly having a printed circuit board.

32. (withdrawn) The device of claim 27, wherein the reflectometer further comprises an optics assembly.

33. (withdrawn) The device of claim 31, wherein the printed circuit board has a face with at least two zone detectors mounted directly thereto.

34. (withdrawn) The device of claim 32, wherein the optics assembly is configured to translate reflected signal from the test zones into a reflectance reading.

35. (withdrawn) A method for detecting two or more analytes in a test sample using a dry reagent lateral flow strip assay device, comprising the steps of:

a) preparing an assay device comprising a sample application zone and two or more test zones in fluid communication with one another through a transport matrix, wherein the transport matrix further comprises a lateral path along which the sample travels laterally, and a transverse path along which the sample travels transversely;

b) applying a sample to the sample application zone;

c) permitting the sample to flow along the lateral path and the transverse path; and

d) detecting a signal from the test zones.

36. (withdrawn) The method of claim 35, wherein the test sample is derived from whole blood, whole blood components, ascites, urine, sweat, milk, synovial fluid, peritoneal fluid, amniotic fluid or cerebrospinal fluid.

37. (withdrawn) The method of claim 35, wherein the sample is pretreated prior to application.

38. (withdrawn) A system for performing an immunoassay and a general chemistry assay to detect two or more analytes in a test sample comprising:

a) a dry reagent lateral flow strip assay device, wherein the strip assay device comprises:

i) a sample application zone;

ii) a binding member zone for detecting a first analyte; and

iii) a general chemistry zone for detecting a second analyte;

wherein the sample application zone, the binding member zone and the general chemistry zone are in fluid communication with one another through a transport matrix; and

b) a device comprising:

i) a housing;

ii) a cover for the housing having an interior surface and an exterior surface, wherein a sample receptor extends therethrough; and

iii) a reflectometer enclosed in the housing adapted to detect a reflectance change from the first test zone and the second test zone and convert the reflectance change to at least one concentration value for either the first analyte or the second analyte or both the first analyte and the second analyte using calibration parameters.

39. (withdrawn) The system of claim 38, wherein either the first analyte or the second analyte is creatine.

40. (withdrawn) The system of claim 38, wherein the first analyte is total cholesterol and the second analyte is HDL cholesterol.

41. (withdrawn) The system of claim 38, wherein either the first analyte or the second analyte is glycated hemoglobin.

42. (withdrawn) The system of claim 38, wherein the two or more analytes are selected from the group consisting of: antigens, antibodies, macromolecules, vitamins, lectins, carbohydrates, proteins, peptides, amino acids, hormones, steroids, therapeutic drugs, drugs of abuse, bacterium and viruses.

43. (withdrawn) The system of claim 38, wherein at least one of the analytes is selected from the group consisting of: creatine, creatinine, glucose, cholesterol, high density lipoprotein (HDL) cholesterol. N-telopeptide, low density lipoprotein (LDL) cholesterol, triglycerides and blood urea nitrogen (BUN).

44. (withdrawn) The system of claim 38, wherein the diagnostic device further comprises a sample receiving device.

45. (withdrawn) The system of claim 44, wherein the sample receiving device further comprises a sample filter pad.

46. (withdrawn) A dry reagent lateral flow strip assay device for performing an immunoassay and a general chemistry assay to detect two or more analytes in a test sample comprising:

a) a sample application zone;

b) a binding member zone for detecting a first analyte; and

c) a general chemistry zone for detecting a second analyte;

wherein the sample application zone, the binding member zone and the general chemistry zone are in fluid communication with one another through a transport matrix.

47. (withdrawn) The assay device of claim 46, wherein the first analyte is glycated hemoglobin.

48. (withdrawn) The assay device of claim 47, wherein the immunoassay is a competitive immunoassay.

49. (withdrawn) The assay device of claim 48, wherein the lateral flow strip assay device further comprises a diffusively immobilized particle-linked antibody capable of binding at least one analyte in the sample, and a non-diffusively immobilized antigen capable of being bound by the particle-linked antibody.

50. (withdrawn) The assay device of claim 49, wherein the sample is pre-treated with a reagent prior to application to the sample reagent zone.

51. (new) The assay device of claim 2, further comprising a sample treatment pad overlapping said transport matrix, a first layer also overlapping said transport matrix, and a second layer overlapping said first layer.

52. (new) The assay device of claim 51, wherein said two or more test zones are located in said second layer.

53. (new) A dry reagent lateral flow strip assay device for detecting two or more analytes in a test sample comprising:

a) a sample application zone; and

b) two or more test zones;

wherein the sample application zone and the two or more test zones are in fluid communication with one another through a transport matrix;

wherein said sample application zone further includes a sample pad and a sample treatment pad in fluid communication with said transport matrix;

wherein said sample treatment pad comprises a quaternary ammonium derived membrane for trapping ascorbate and other anionic interferents; and

wherein the transport matrix further comprises a lateral path along which the sample travels laterally, and a transverse path along which the sample travels transversely.